FILE 'CAPLUS' ENTERED AT 08:13:50 ON 20 MAR 2002
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FILE 'MEDLINE' ENTERED AT 08:13:50 ON 20 MAR 2002

=> s bioactive glass (25a) cell culture#
L1 13 BIOACTIVE GLASS (25A) CELL CULTURE#

=> dup rem l1
PROCESSING COMPLETED FOR L1
L2 11 DUP REM L1 (2 DUPLICATES REMOVED)

=> d 1-11 bib ab

L2 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
AN 2001:862966 CAPLUS
TI Dose-dependent behavior of bioactive glass dissolution
AU Jones, Julian R.; Sepulveda, Pilar; Hench, Larry L.
CS Centre for Tissue Regeneration, Department of Materials, Imperial College of Science, Technology and Medicine, London, SW7 2BP, UK
SO J. Biomed. Mater. Res. (2001), 58(6), 720-726
CODEN: JBMRBG; ISSN: 0021-9304
PB John Wiley & Sons, Inc.
DT Journal
LA English
AB The effect of glass dosage (0.001 g ml-1 to 0.015 g ml-1) on the in vitro dynamic dissoln. behavior of melt-derived 45S5 and sol-gel-derived 58S bioactive glasses, in simulated body fluid (SBF) at 37.degree.C, was evaluated. These glasses differ significantly in texture, esp. the sp. surface area and porosity, as a result of differences in manufg. route. The concns. of elements (Si, Ca, P, and Na) leached from the glasses into the dissoln. medium, from 1 to 22 h, were evaluated with the use of induced coupled plasma anal. (ICP). The reacted powders were analyzed with the use of FTIR to observe the formation of a hydroxycarbonate apatite layer on the surface. The results show that the rate of HCA formation on both gel- and melt-derived bioactive glass powders in vitro depends on the concn. of the powders in soln. This result must be taken into account when carrying out in vitro **cell-culture** studies to simulate conditions in vivo and in expts. using exts. of the **bioactive glass** powders.
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 2 OF 11 MEDLINE
AN 2001275314 MEDLINE
DN 21262944 PubMed ID: 11370806
TI 3D bone tissue engineered with bioactive microspheres in simulated microgravity.
AU Qiu Q Q; Ducheyne P; Ayyaswamy P S
CS Department of Bioengineering, Center for Bioactive Materials and Tissue Engineering, University of Pennsylvania, Philadelphia 19104, USA.
SO IN VITRO CELLULAR AND DEVELOPMENTAL BIOLOGY. ANIMAL, (2001 Mar) 37 (3) 157-65.
Journal code: BZE; 9418515. ISSN: 1071-2690.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)

LA English
FS Priority Journals
EM 200110
ED Entered STN: 20011008
Last Updated on STN: 20011008
Entered Medline: 20011004
AB Three-dimensional (3D) osteoblast **cell cultures** were obtained in rotating-wall vessels (RWV), simulating microgravity. Three types of bioactive microcarriers, specifically modified **bioactive glass** particles, bioceramic hollow microspheres, and biodegradable **bioactive glass**-polymer composite microspheres, were developed and used with osteoblasts. The surfaces of composite microspheres fully transformed into bone apatite after 2-wk immersion in simulated physiological fluid, which demonstrated their bone-bonding ability. The motion of microcarriers in RWVs was photographically recorded and numerically analyzed. The trajectories of hollow microspheres showed that they migrated and eventually stayed around at the central region of the RWV. At their surfaces, shear stresses were low. In contrast, solid glass or polymer particles moved toward and finally bounced off the outer wall of the RWVs. Cell culture studies in the RWV using bone marrow stromal cells showed that the cells attached to and formed 3D aggregates with the hollow microspheres. Extracellular matrix and mineralization were observed in the aggregates. Cell culture studies also confirmed the ability of the composite microspheres to support 3D bone-like tissue formation. These data suggest that the new hollow bioceramic microspheres and degradable composite microspheres can be used as microcarriers for 3D bone tissue engineering in microgravity. They also have potential applications as drug delivery systems.

L2 ANSWER 3 OF 11 MEDLINE
AN 2002015607 MEDLINE
DN 21309216 PubMed ID: 11416860
TI Proliferation and differentiation rates of a human osteoblast-like cell line (SaOS-2) in contact with different bone substitute materials.
AU Mayr-Wohlfart U; Fiedler J; Gunther K P; Puhl W; Kessler S
CS Orthopaedic Department (RKU), University of Ulm, Oberer Eselsberg 45, 89081 Ulm, Germany.. uschi.mayr-wohlfart@medizin.uni-ulm.de
SO JOURNAL OF BIOMEDICAL MATERIALS RESEARCH, (2001 Oct) 57 (1) 132-9. Journal code: 0112726. ISSN: 0021-9304.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200112
ED Entered STN: 20020121
Last Updated on STN: 20020121
Entered Medline: 20011207
AB The aim of our study was to investigate the influence of four bone substitutes on the growth behavior of a human osteoblast-like cell line (SaOS-2) culture: pure alpha tricalcium phosphate (alpha-TCP = BIOBASE), a **bioactive glass** (bioglass), a neutralized glass-ceramic (GB9N), and solvent dehydrated bone. We established an in vitro **cell culture** model with three-dimensional scaffolds (cubes of 0.7 x 0.7 x 1.0 cm) of porous bone substitutes to investigate proliferation and differentiation rates of SaOS-2 cells. The cultures were analyzed for individual cell morphology after 5 days of growing using scanning electron microscopy. Fracture preparations of the cubes showed that cells could infiltrate the porous structures, but the cell shapes varied from individual round-shaped cells to wide spread cells and cell

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clusters, depending on the material. Also, the differentiation of the seeded cells was dissimilar after a 5-day incubation. The specific alkaline phosphatase (ALP) enzyme activity (ALP/DNA) measured in the supernatants of alpha-TCP-grown cells was nine times higher than the lowest activity, as observed by cells incubated on GB9N. Early (Collagen1, ALP) and late marker (osteocalcin, bone sialoprotein) of osteoblastic differentiation were proofed by reverse transcriptase-polymerase chain reaction analysis. Cells grown on bone substitutes and bioglass seem to be less differentiated than alpha-TCP-grown cells, because of noticeably less amounts of osteocalcin and bone sialoprotein. The cultivation on GB9N seems to dedifferentiate the cells, because even the ALP expression was reduced as well. Our results indicate that distinct bone substitutes influence proliferation and differentiation of osteoblastic cells in different manners. These results might influence the selection of an adequate bone substitute for clinical use as well, part from degradative and biomechanical properties.

L2 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2002 ACS
AN 2001:196240 CAPLUS
DN 135:111922
TI Chemical durability of commercial silicate glasses. I. Material characterization
AU Jedlicka, A. B.; Clare, A. G.
CS New York State College of Ceramics, Alfred University, Alfred, NY, 14802, USA
SO Journal of Non-Crystalline Solids (2001), 281(1-3), 6-24
CODEN: JNCSBJ; ISSN: 0022-3093
PB Elsevier Science B.V.
DT Journal
LA English
AB Six com. silicate glasses; silica, sodalime silicate, two fiberglass compns. and two Bioglass compns. were subjected to three solns.: distd. water, Dulbecco's phosphate buffered saline soln. and Ham's F-12 1x cell culture media under the exact exptl. conditions that would be encountered during a cell culture study. For companion, a binary sodium silicate glass was also exposed. Wt. loss, diffuse reflectance IR spectroscopy (DRIFTS) and potentiometric titrn. were used to det. the chem. evolution of the substrates during a typical period for cell culturing. The silica, sodalime silicate and high-silica fiberglass material showed only small changes in all cases except for differences in OH active site concn. The Bioglass compns. and the low-silica fiberglass exhibited soln.-dependent dynamic surface chem. The sodium silicate was too dynamic for even the most aggressive buffering system. The purpose of this study was to elucidate cell behavior to be reported in a later paper.
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2002 ACS
AN 2000:190879 CAPLUS
DN 132:227460
TI Anti-inflammatory and antimicrobial uses for bioactive glass compositions
IN Greenspan, David C.; West, Jon K.; Lee, Sean; Meyers, James L.; Diamond, Mason
PA US Biomaterials Corp., USA
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

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SO Journal of Non-Crystalline Solids (2001), 281(1-3), 6-24
CODEN: JNCSBJ; ISSN: 0022-3093
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DT Journal
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DN 132:227460
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IN Greenspan, David C.; West, Jon K.; Lee, Sean; Meyers, James L.; Diamond, Mason
PA US Biomaterials Corp., USA
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000015167	A1	20000323	WO 1999-US20644	19990910
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9962447	A1	20000403	AU 1999-62447	19990910
	EP 1123072	A1	20010816	EP 1999-949609	19990910
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRAI	US 1998-99725P	P	19980910		
	US 1999-392516	A	19990909		
	WO 1999-US20644	W	19990910		

AB Compns. and methods for treating wounds to significantly reduce the healing time, reduce the incidence of scar formation, improve the success of skin grafts, reduce the inflammatory response and providing anti-bacterial treatments to a patient in need thereof, that include small non-interlinked particles of bioactive glass or highly porous bioactive glass, are disclosed. Anti-bacterial solns. derived from bioactive glass, and methods of prepn. and use thereof, are also disclosed. The compns. include non-interlinked particles of bioactive glass, alone or in combination with anti-bacterial agents and/or anti-inflammatory agents. The compns. can include an appropriate carrier for topical administration. Anti-bacterial properties can be imparted to implanted materials, such as prosthetic implants, sutures, stents, screws, plates, tubes, and the like, by incorporating small bioactive glass particles or porous bioactive glass into or onto the implanted materials. Anti-bacterial properties can also be imparted to devices used for in vitro and ex vivo **cell culture** by incorporating non-interlinked particles of **bioactive glass** into the devices. Anti-bacterial compns. derived from aq. exts. of bioactive glass are also disclosed. These compns. can be used, for example, in food prepn., solns. used for cell culture, and buffer solns., such as i.v. solns. A would was treated with a mixt. of particulate noninterlinked bioactive glass with a fine particle size, a topical antibiotic including sulfadiazine, and a petrolatum base carrier. After only 4 days, seepage of the wound was stopped and the surface of the wound appeared dry. If only a topical antibiotic was used to treat a wound in a patient with vasculitis, it would normally take about 2 seeks to stop seepage.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 6 OF 11 MEDLINE
AN 2000396761 MEDLINE
DN 20273870 PubMed ID: 10813757
TI Tensile properties of bioactive fibers for tissue engineering applications.
AU De Diego M A; Coleman N J; Hench L L
CS Department of Materials, Imperial College of Science, Technology and Medicine, Prince Consort Road, London, SW7 2BP, UK.
SO JOURNAL OF BIOMEDICAL MATERIALS RESEARCH, (2000) 53 (3) 199-203.
Journal code: HJJ; 0112726. ISSN: 0021-9304.
CY United States

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PI	WO 2000015167	A1	20000323	WO 1999-US20644	19990910
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L2 ANSWER 6 OF 11 MEDLINE
AN 2000396761 MEDLINE
DN 20273870 PubMed ID: 10813757
TI Tensile properties of bioactive fibers for tissue engineering applications.
AU De Diego M A; Coleman N J; Hench L L
CS Department of Materials, Imperial College of Science, Technology and Medicine, Prince Consort Road, London, SW7 2BP, UK.
SO JOURNAL OF BIOMEDICAL MATERIALS RESEARCH, (2000) 53 (3) 199-203.
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CY United States

DT Journal; Article; (JOURNAL ARTICLE)
LA English
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EM 200008
ED Entered STN: 20000824
Last Updated on STN: 20000824
Entered Medline: 20000815
AB Cell transplantation using biocompatible, biodegradable scaffolds offers the possibility of creating or regenerating tissue to replace organ function when deficiency arises. The role of these temporary substrates is to support and guide the expanding **cell culture** until it becomes structurally integrated with the host tissue. 45S5 Bioglass(R) is a 4-component, melt-derived **bioactive glass**, which has been approved for human clinical use by the Food and Drug Administration. The biocompatibility and biodegradability of 45S5 Bioglass(R) are long established, whereas research into its performance as an extracellular scaffold is currently underway. In this study the tensile strengths (93 +/- 8 and 82 +/- 14 MPa), elongation to fracture (0.7 +/- 0.05%) and Weibull's moduli (3.0 and 3.5) of 45S5 Bioglass(R) fibers (mean diameters 193 and 280 &mgr;m) for tissue engineering applications are reported. The tensile strengths of the fibers are compared with those of bulk 45S5 Bioglass(R) and a range of biodegradable polymer materials currently used in the field of tissue engineering. Aspects of glass and fiber technology relevant to the design and manufacture of extracellular ceramic scaffolds are also discussed.

L2 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2002 ACS
AN 1997:94862 CAPLUS
DN 126:190893
TI Biocompatibility evaluation of **bioactive glass** ceramics (BFC), hydroxylapatite, titanium, and Cr-Co alloy by human fetal osteoblast **cell culture** methods
AU Wang, Huiming; Li, Peng; Wang, Motang; Chen, Anyu
CS Affiliated Hospital, Zhejiang Medical Univ., Hangzhou, 310003, Peop. Rep. China
SO Zhongguo Shengwu Yixue Gongcheng Xuebao (1996), 15(3), 244
CODEN: ZSYXEI; ISSN: 0258-8021
PB Zhongguo Yixue Kexueyuan
DT Journal
LA Chinese
AB Osteoblast cells derived from human fetal calvarium were used in vitro to clarify the biocompatibility of implant material such as HA, BFC, Ti, and Cr-Co alloy. The cell attachment, extending and phenotype were obsd. and cell proliferation, alk. phosphatase activity and calcium content were assessed. The hydroxylapatite (HA) and BFC promoted osteoblast cell migration and attachment. Titanium had no such effect. The Cr-Co alloy had inhibitive effects on alk. phosphatase and calcium catabolism, and the metabolic inhibition on osteoblast occurred before the inhibition on cell proliferation, thus not a good candidate.

L2 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2002 ACS
AN 1995:437263 CAPLUS
TI Preliminary ageing study of **bioactive glass** in a **cell culture** model
AU Vrouwenvelder, W. C. A.; Groot, C. G.; De Groot, K.
CS Biomaterials Res. Group, Rijnsburgerweg, 2333 AA, Neth.
SO J. Mater. Sci.: Mater. Med. (1995), 6(3), 144-9
CODEN: JSMMEL; ISSN: 0957-4530

DT Journal; Article; (JOURNAL ARTICLE)
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ED Entered STN: 20000824
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DT Journal
LA English
AB In the past we sometimes found poor cell morphol. and relatively low biochem. values for osteoblast cultures on bioactive glass. These observations were not caused by any external causes. Our hypothesis is that the surface reactivity of polished bioactive glassslides might decrease slowly due to the influence of (air-) humidity during storage under normal room conditions. In the present study we investigated the ageing of bioactive glass stored under room conditions as well as bioactive glass stored under dry conditions. We also compared the results with glass slides stored at about one year with freshly obtained bioactive glass slides, both stored under dry conditions. We evaluated several histol. and biochem. parameters obtained from osteoblast cultures on the differently preserved glass slides. The results showed that bioactive glass probably maintains its bioactive nature when stored under dry conditions. We found different biochem. values for bioactive glass prepd. with a new oven and elaborated with new polishing techniques in comparison with previously prepd. batches and bioactive glass. These results indicate that different bioactive glass batches with identical compn. may not be identical in terms of bioactivity.

L2 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2
AN 1995:245824 CAPLUS
DN 122:64245
TI **Bioactive glass**-ceramic containing crystalline apatite and wollastonite initiates biomineralization in bone **cell cultures**
AU Sautier, J. M.; Kokubo, T.; Ohtsuki, T.; Nefussi, J. R.; Boulekbache, H.; Oboeuf, M.; Loty, S.; Loty, C.; Forest, N.
CS Lab. de Biologie-Odontologie, Univ. Paris, Paris, Fr.
SO Calcif. Tissue Int. (1994), 55(6), 458-66
CODEN: CTINDZ; ISSN: 0171-967X
DT Journal
LA English
AB Rat bone cells were cultured in the presence of bioactive glass-ceramic contg. cryst. apatite and wollastonite. SEM observations of the surface of the seeded ceramic disks revealed that cells attached, spread, and proliferated on the material surface. Soaking in cell-free culture medium showed that no change occurred in the surface structure. However, when cultured with bone cells and obsd. under a transmission electron microscope, an electron-dense layer was noted initially at the surface of the material, before bone formation occurred. In addn., energy-dispersive x-ray microanal. demonstrated the presence of calcium and phosphorus in this layer. Progressively, during the following days of culture, active osteoblasts synthesized and laid down an osteoid matrix composed of numerous collagen fibrils arranged either parallel or perpendicularly to the first-formed electron-dense layer. Mineralization initiated on the ceramic surface dispersed then along the collagenous fibrils, leading to a mineralized matrix which surrounded the ceramic particles. These results demonstrate the capacity of apatite-wollastonite glass ceramic to initiate biomineralization in osteoblast cultures and to achieve a direct bond between the surface apatite layer of the bioactive glass-ceramic and the mineralized bone matrix.

L2 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2002 ACS
AN 1993:525136 CAPLUS
DN 119:125136
TI Biocompatibility of fibroblasts with bioactive glass
AU Kubo, Kohji; Kakimoto, Takashi; Tsukasa, Nobuyuki; Nakayama, Kiyotaka;

DT Journal
LA English
AB In the past we sometimes found poor cell morphol. and relatively low biochem. values for osteoblast cultures on bioactive glass. These observations were not caused by any external causes. Our hypothesis is that the surface reactivity of polished bioactive glassslides might decrease slowly due to the influence of (air-) humidity during storage under normal room conditions. In the present study we investigated the ageing of bioactive glass stored under room conditions as well as bioactive glass stored under dry conditions. We also compared the results with glass slides stored at about one year with freshly obtained bioactive glass slides, both stored under dry conditions. We evaluated several histol. and biochem. parameters obtained from osteoblast cultures on the differently preserved glass slides. The results showed that bioactive glass probably maintains its bioactive nature when stored under dry conditions. We found different biochem. values for bioactive glass prepd. with a new oven and elaborated with new polishing techniques in comparison with previously prepd. batches and bioactive glass. These results indicate that different bioactive glass batches with identical compn. may not be identical in terms of bioactivity.

L2 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2
AN 1995:245824 CAPLUS
DN 122:64245
TI **Bioactive glass**-ceramic containing crystalline apatite and wollastonite initiates biomineralization in bone **cell cultures**
AU Sautier, J. M.; Kokubo, T.; Ohtsuki, T.; Nefussi, J. R.; Boulekbache, H.; Oboeuf, M.; Loty, S.; Loty, C.; Forest, N.
CS Lab. de Biologie-Odontologie, Univ. Paris, Paris, Fr.
SO Calcif. Tissue Int. (1994), 55(6), 458-66
CODEN: CTINDZ; ISSN: 0171-967X
DT Journal
LA English
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AU Kubo, Kohji; Kakimoto, Takashi; Tsukasa, Nobuyuki; Nakayama, Kiyotaka;

Hiwatashi, Kyoko; Izumi, Yuichi; Sueda, Takeshi; Kaneko, Norio
CS Dent. Sch., Kagoshima Univ., Kagoshima, 890, Japan
SO Seitai Zairyo (1993), 11(2), 85-9
CODEN: SEZAEH; ISSN: 0910-304X
DT Journal
LA Japanese
AB The biocompatibility of cultured fibroblasts with biomaterials, bioactive glass, soda lime glass, titanium, and Fe-Cr-Ni-Co alloy, was studied. For examn. of direct or indirect effect of **bioactive glass** to fibroblasts, cells were cultured on each biomaterial or on Transwell **cell culture** chamber with **bioactive glass** and soda lime glass. After incubation of 1, 3, 5 and 7 days, the nos. of attached fibroblasts on each biomaterial or on each Transwell cell culture chamber were measured using microcell counter. The direct effect was assessed by initial cell adhesion ratio and doubling time on each biomaterial, and indirect effect was assessed by cell proliferation on Transwell cell culture chamber. The initial cell adhesion ratio and doubling time on bioactive glass were inferior to those of titanium, soda lime glass, and Fe-Cr-Ni-Co alloy. Fibroblasts with bioactive glass in Transwell showed proliferation similar to that of soda lime glass. The materials released from bioactive glass don't affect fibroblasts proliferation, and the change of structure on bioactive glass surface has an effect on fibroblasts adhesion and growth.

L2 ANSWER 11 OF 11 MEDLINE
AN 85076876 MEDLINE
DN 85076876 PubMed ID: 6391945
TI Growth of fibroblasts and epithelioid cells on a new machinable bioactive glass ceramic in comparison with non-reactive materials.
AU Neupert G; Vogel W
SO EXPERIMENTAL PATHOLOGY, (1984) 26 (2) 113-6.
Journal code: EQR; 8108218. ISSN: 0232-1513.
CY GERMANY, EAST: German Democratic Republic
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198501
ED Entered STN: 19900320
Last Updated on STN: 19900320
Entered Medline: 19850131
AB In this study scanning electron microscopy (SEM) was used to investigate the substrate attachment, cell spreading and growth properties of fibroblasts and epithelioid cells on a newly developed machinable **bioactive glass** ceramic. The morphogenetic reactions of **cell cultured** on bioactive ceramic were compared with those of identical cells cultured on non-reactive glass and vitreous carbon. The adhesion, subsequent spreading and the growth appearance of fibroblasts and epithelioid cells on the surface of machinable glass ceramics are similar to those on nonreactive materials. Our findings concerning the behaviour of cell populations in vitro on the surface of a new machinable glass ceramic allow the conclusion that this implant material is adhesive for cells and biocompatible.

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	27.27	27.42

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CY GERMANY, EAST: German Democratic Republic
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FULL ESTIMATED COST 0.00 27.42

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=> s (bioactive glass or bioglass or 45s5) (25a) cell culture#
L3 3 (BIOACTIVE GLASS OR BIOGLASS OR 45S5) (25A) CELL CULTURE#

=> d 1-3 bib hit

L3 ANSWER 1 OF 3 PROMT COPYRIGHT 2002 Gale Group

AN 86:41535 PROMT
TI Products:Product news in brief:SoloHill mammalian cell culture beads.
SO SCRIP, (26 Feb 1986) pp. 30.
LA English
AB SoloHill Engineering (US) will develop glass-coated microcarrier beads for mammalian **cell culture** growth. It has been awarded a $207,000 grant by the US National Cancer Institute for the R&D. The **bioglass** beads will be used in human and veterinary vaccines production, as well as in the production of monoclonal antibodies and genetically engineered products.

L3 ANSWER 2 OF 3 BIOBUSINESS COPYRIGHT 2002 BIOSIS
AN 1998:53842 BIOBUSINESS
DN 1005665
TI Effect of particulate bioactive glass on human synoviocyte cultures.
AU Bendall S P Gaies M Frondoza C Jinnah R H Hungerford D S
CS Johns Hopkins Univ., Good Samaritan Hosp., Good Samaritan Professional Building, 5601 Loch Raven Boulevard, G-1, Baltimore, MD 21239, USA.
SO Journal of Biomedical Materials Research, (1998) Vol.41, No.3, p.392-397. ISSN: 0021-9304.
DT ARTICLE
FS NONUNIQUE
LA English
AB Bioglass is a resorbable glass material that has been shown to induce osteoblast proliferation as well as bone matrix production in vitro. Its

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ST RESEARCH ARTICLE HUMAN HUMAN SYNOVIOCYTES **BIOGLASS** OSTEOBLASTS BONE MATRIX PRODUCTION **CELL CULTURE** MODEL TNF-ALPHA TUMOR NECROSIS FACTOR-ALPHA BIOMATERIALS SKELETAL SYSTEM IMMUNE SYSTEM BIOTECHNOLOGY SKELETAL SYSTEM RESORBABLE GLASS MATERIAL IMPLANT COATING CERAMIC MATERIAL PROLIFERATION

L3 ANSWER 3 OF 3 BIOBUSINESS COPYRIGHT 2002 BIOSIS
AN 94:23436 BIOBUSINESS
DN 0603638
TI Better histology and biochemistry for osteoblasts cultured on titanium-doped bioactive glass: Bioglass 45S5 compared with iron-, titanium-, fluorine- and boron-containing bioactive glasses.
AU Vrouwenvelder W C A; Groot C G; De Groot K
CS Biomaterials Res. Group, Sch. Med., Univ. Leiden, Rijnsburgerweg 10 bld. 55, 2333 AA Leiden, NET
SO Biomaterials, (1994) Vol.15, No.2, P.97-106.
ISSN: 0142-9612.
FS NONUNIQUE
LA ENGLISH
AB In the present study we used an established **cell culture** model to compare **Bioglass 45S5** with four other bioactive glasses. Small substitutions or additions of certain ions like iron, titanium, fluorine or boron modified the basic 45S5 glass network. We used several histological and biochemical parameters to interpret the results found in terms of the used model. Regarding 45S5 as a reference, we found that osteoblasts cultured on iron-doped bioactive glass showed a more flattened morphology, and both lower proliferation rate and osteoblast expression. Osteoblasts cultured on titanium-doped glasses also showed a flattened morphology, but higher proliferation and remarkably higher osteoblast expression. On fluorine- and boron-containing glasses the osteoblasts showed a rather compact morphology, a normal proliferation but only moderate osteoblast expression. With microprobe analysis it was shown that the formation of calcium and phosphorus on titanium-doped glass was relatively lower and the release of sodium slower when compared with 45S5. Osteoblasts cultured on titanium-doped bioactive glasses demonstrated superior histological and biochemical parameters when compared with the other glass types. Further research into the physico-chemical properties and the in vivo behaviour of doped bioactive glasses is recommended.

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SO EXPERIMENTAL PATHOLOGY, (1984) 26 (2) 113-6.
Journal code: EQR; 8108218. ISSN: 0232-1513.
CY GERMANY, EAST: German Democratic Republic
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198501
ED Entered STN: 19900320
Last Updated on STN: 19900320
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Cell culture art

AN **85209111** MEDLINE
DN 85209111 PubMed ID: 2860165
TI Experimental and preliminary clinical experience with absorbable calcium phosphate granules containing an antibiotic or antiseptic for the local treatment of osteomyelitis.
AU Eitenmuller J; Schmidt K H; Peters G; Gellissen G; Weltin R; Reichmann W
SO JOURNAL OF HOSPITAL INFECTION, (1985 Mar) 6 Suppl A 177-84.
Journal code: 8007166. ISSN: 0195-6701.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198507
ED Entered STN: 19900320
Last Updated on STN: 19950206
Entered Medline: 19850709
AB Experimental studies on dogs with staphylococcal osteomyelitis showed that it is possible to reduce florid bone suppuration by the use of hydroxyapatite granules containing an antibiotic or antiseptic. In our series the use of flucloxacillin hydroxyapatite granules was superior to other treatment methods. Twelve patients were treated with thorough sequestrectomy, reliable wound closure and suitable stabilization supplemented with an implant of antibiotic or antiseptic hydroxyapatite granules, and an autologous spongiosa graft for large bone cavities or for discontinuity between the bone ends. The results of this preliminary study showed the treatment to be effective.

AN **89036678** MEDLINE
DN 89036678 PubMed ID: 3183917
TI Histological study of the hydroxyapatite-collagen complex implants in periodontal osseous defects in dogs.
AU Minabe M; Sugaya A; Satou H; Tamura T; Ogawa Y; Hori T; Watanabe Y
CS Department of Periodontology, Kanagawa Dental College, Yokosuka, Japan.
SO JOURNAL OF PERIODONTOLOGY, (1988 Oct) 59 (10) 671-8.
Journal code: 8000345. ISSN: 0022-3492.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Dental Journals; Priority Journals
EM 198812
ED Entered STN: 19900308
Last Updated on STN: 19980206
Entered Medline: 19881222
AB This study was performed to determine whether the process of wound healing, following periodontal surgery, could be improved through the combined use of collagen and grafting of hydroxyapatite (HAP) particles. Twenty-four proximal defects were made in the mandibular fourth premolars and second molars of six adult mongrel dogs. Steel wires and resin were put into the defect to enhance plaque formation. At eight weeks, the wires and resin were removed. At ten weeks, HAP or HAP-collagen complex was implanted during reconstructive surgery, along the root surface treated with acid conditioning. Dogs that received no implant following a flap operation served as controls. In these three groups of animals, differences in the extent and features of healing were histopathologically examined two months later. Animals implanted with a HAP-collagen complex showed a larger amount of new cementum formation when compared with HAP-implanted or control animals. In addition, in animals from the HAP-complex group, the interdigitation between the root surface and the gingival connective tissue fibers tended to be reinforced resulting in suppressed epithelial downgrowth. However, neither bone formation nor the reformation of the periodontium was promoted in the HAP-collagen complex group. These results suggest that implantation of an HAP-collagen complex promotes cemento-genesis of the demineralized root surface and can establish a stronger interdigitation between the root surface and the gingival connective tissue fibers.

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